

**UNITED STATES DISTRICT COURT  
DISTRICT OF MASSACHUSETTS**

SINGULAR COMPUTING LLC,

Plaintiff,

v.

GOOGLE LLC,

Defendant.

Civil Action No. 1:19-cv-12551-FDS

Hon. F. Dennis Saylor IV

**PLAINTIFF’S TRIAL BRIEF**

Plaintiff, Singular Computing LLC (“Singular”), respectfully submits this Trial Brief pursuant to Local Rule 16.5(f).

**I. INTRODUCTION**

The original complaint in this case was filed in December 2019. *See* Dkt. No. 1. Since that time, the Court gained thorough familiarity with: the parties; the patents; the prior art; the technology; the issues; and the factual and legal disputes in this case. This includes through patent ineligibility motions, multiple claim construction proceedings, motions for summary judgment, motions to compel; motions relating to contentions; *Daubert* motions, motions *in limine*, etc. Accordingly, Singular will limit this brief to outlining the issues that remain to be decided by the jury at trial.

**II. ISSUES TO BE TRIED**

**A. SINGULAR**

Singular is the owner, by assignment from Dr. Joseph Bates<sup>1</sup>, of U.S. Patent Nos. 8,407,273 and (“the ’273 patent”) and 9,218,156 (“the ’156 patent”). Generally, these patents

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<sup>1</sup> Dr. Bates will describe to the jury, *inter alia*, the background of himself and Singular, the asserted patents and his communications and other dealings with Google.

relate to computer architectures for processing with compact arithmetic processing elements. *See e.g.*, Order on Motion for Further Claim Construction (Dkt. No. 633), p. 1. At trial, Singular will present its case that defendant, Google LLC (“Google”), has literally infringed claim 53 of the ’273 patent and claim 7 of the ’156 patent. The accused infringing products are known as Tensor Processing Units (“TPUs”), version 2 and version 3. Singular’s technical expert, Dr. Sunil Khatri, will explain to the jury where each element of the asserted claims is found in the accused products. The period of infringement began in 2017 and will continue at least through the end of this trial. Singular’s burden of proof on the issue of infringement is by a preponderance of the evidence. *See, e.g., Siemens Med. Sol. ’s USA, Inc. v. St.-Gobain Ceramics & Plastics, Inc.*, 637 F.3d 1269, 1279 (Fed. Cir. 2011).

Singular also asserts that Google’s infringement has been, and continues to be, willful, i.e. intentional and/or deliberate. Dkt. No. 37 at p. 6. In support, Singular will show that Google copied Singular’s patented design from various presentations Dr. Bates provided to Google pursuant to a non-disclose agreement (“NDA”) and in other communications. Singular will also show that Google, having been given notice that Singular had patent rights, was willfully blind to such rights. Singular will also show that Google attempted to cover up its infringement and failed to act consistently with the standards of behavior in this industry. *Id.* at p. 6-8. Singular’s burden of proof on the issue of willful infringement is by a preponderance of the evidence. *See, e.g., Ironburg Inventions Ltd. v. Valve Corp.*, 64 F.4th 1274, 1296 (Fed. Cir. 2023).

As to damages, Singular requests that the jury award a reasonable royalty in the form of a one-time lump sum payment. Singular’s damages expert, Philip Green, will testify that a reasonable royalty should be based upon the costs savings derived by Google from its use of the accused products in its data centers throughout the United States as compared with using other

allegedly non-infringing devices. Mr. Green will opine that an appropriate royalty award for the jury to render in this case would be in the amount of several billion dollars.

## **B. GOOGLE**

Google denies infringement on the basis that the term “execution unit” in the asserted claims requires a “physically distinct” processing element comprising an arithmetic circuit paired with a memory circuit. *See* Dkt. No. 633, p. 2.<sup>2</sup> In its Order on Google’s Motion for Further Claim Construction, the Court rejected Google’s “physically distinct” argument. *Id.* at 5. Thus, Google should not be permitted to pursue this argument at trial. In any event, Singular’s technical expert witness, Dr. Khatri, will explain to the jury where each element of the asserted claims is found in both accused TPU devices in accordance with the Court’s claim construction.

As to validity, Google will apparently argue at trial that the asserted claims are anticipated and/or rendered obvious by the VFLOAT system and the Tong article under 35 U.S.C. §§102/103. Google has the burden of proving invalidity by clear and convincing evidence. *See, e.g., Core Wireless Licensing S.A.R.L v. LG Elecs., Inc.*, 880 F.3d 1356, 1364 (Fed. Cir. 2018). During cross-examination, Singular will demonstrate that Google cannot meet its burden with respect to VFLOAT and Tong. Dr. Khatri will, if necessary, rebut Google’s invalidity arguments following the close of Google’s case.

As to damages, Google’s expert, Laura Stamm, will attempt to rebut Mr. Green’s damages calculations and argue that the reasonable royalty resulting from cost savings would be several million dollars based on two allegedly non-infringing alternatives that did not exist at the time of infringement. Ms. Stamm’s opinion will be shown to be inconsistent with the statutory

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<sup>2</sup> In its original Claim Construction Order, the Court adopted Singular’s proposed construction of “processing element”. *See* Dkt. No. 354. At that time, Google did not request a construction that included the additional limitation “physically distinct”.

requirement that Singular be fully compensated for Google's acts of infringement. *See* 35 U.S.C. §284.

### **III. OUSTANDING MOTIONS**

The Court has yet to decide:

- Singular's Motion *in Limine* No. 4 regarding whether the VFLOAT system constitutes prior art (Dkt. No. 619), and
- Singular's Motion *in Limine* No. 10 regarding the patent marking statute (35 U.S.C. §287) (Dkt. No. 628).
- Google's Motion *in Limine* No. 4 regarding evidence or argument of communications between Google employees and attorneys (Dkt. No. 630).

The parties just filed their respective proposed Jury Instructions and Jury Verdict Forms. No doubt there will be disputes arising between the parties regarding these proposed instructions and forms.

Dated: December 29, 2023

Respectfully submitted,

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**CERTIFICATE OF SERVICE**

I hereby certify that all counsel of record who have consented to electronic service are being served with a copy of this document via the Court's CM/ECF system.

/s/ Kevin Gannon